Remarks

The Office Action mailed August 18, 2005 and made final has been carefully reviewed and the foregoing amendments have been made in consequence thereof.

Claims 1-31 are pending in this application. Claims 1-30 stand rejected. Claim 31 is newly added. No new matter has been added.

A fee calculation sheet for the newly added claim and authorization to charge a deposit account in the amount of the calculated fee are submitted herewith. In addition, in accordance with 37 C.F.R. 1.136(a), a three month extension of time is submitted herewith to extend the due date of the response to the Office Action dated August 18, 2005, for the above-identified patent application from November 18, 2005, through and including February 18, 2006. In accordance with 37 C.F.R. 1.17(a)(3), authorization to charge a deposit account in the amount of $1,020.00 to cover this extension of time request also is submitted herewith.

The rejection of Claims 1-30 under 35 U.S.C. § 103(a) as being unpatentable over Freeman et al. (U.S. Patent No. 6,249,775) ("Freeman") in view of Thiesson et al. (U.S. Patent No. 6,408,290) ("Thiesson") is respectfully traversed.

Applicants respectfully submit that no combination of Freeman and Thiesson describes or suggests the claimed invention. As discussed below, at least one of the differences between the cited references and the present invention is that neither Freeman nor Thiesson, alone or in combination, describe or suggest a method for correlating descriptive attributes of a portfolio of assets for valuation of the assets included within the portfolio that includes at least one of fully underwriting each asset individually included within a first portion of the asset portfolio, and grouping and underwriting a sample of assets included within the first portion of the asset portfolio *for computing a value for each asset included within the first portion of the asset portfolio, and storing in the database asset data including the computed value and descriptive attribute variables for each asset included within the first portion.* (Emphasis added.)

Moreover, Applicants respectfully submit that neither Freeman nor Thiesson, alone or in combination, describe or suggest *using a computer to statistically infer a value for each asset included within a second portion of the asset portfolio by performing a correlation process*

between descriptive attribute variables for assets included within the second portion and asset data acquired from analyzing the first portion of the asset portfolio including the computed value of each asset included with the first portion. (Emphasis added.)

Furthermore, Applicants submit that neither Freeman nor Thiesson, alone or in combination, describe or suggest a *correlation process* that includes *identifying at least two descriptive attribute variables* for assets included within the second portion of the portfolio for *correlating with descriptive attribute variables stored in the database for assets included within the first portion of the portfolio, calculating a value of a response variable for assets included within the second portion based on the asset data assigned to assets included within the first portion having descriptive attribute variables that correlate with the identified descriptive attribute variables*, and *grouping the assets* included within the second portion according to the calculated value of the response variable. (Emphasis added.)

As explained below, although Thiesson mentions using mixtures of Bayesian networks to perform inferencing, Thiesson does not describe or suggest using a computer to statistically infer a value for each asset included within a second portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second portion and asset data acquired from analyzing the first portion of the asset portfolio including the computed value of each asset included with the first portion. Applicants submit that merely discussing inferencing to output a result does not describe or teach using a computer to statistically infer a value for each asset included within a second portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second portion and asset data acquired from analyzing the first portion of the asset portfolio including the computed value of each asset included with the first portion.

Applicants also submit that Thiesson is non-analogous art that is not relevant to the present patent application. More specifically, Thiesson describes the construction of mixtures of Bayesian networks used to perform inferencing wherein a mixture of Bayesian networks (MBN) consists of plural hypothesis-specific Bayesian networks (HSBNs) having possibly hidden and observed variables. The constructed mixtures of Bayesian networks are used to assist users in a decision making process. Thiesson does not address issues related to a method for correlating descriptive attributes of a portfolio of assets for valuation of the assets included within the

portfolio. Applicants submit that constructing mixtures of Bayesian networks that are used to assist users in a decision making process is significantly different than correlating descriptive attributes of a portfolio of assets for valuation of the assets included within the portfolio.

Given the obvious differences between a method of constructing mixtures of Bayesian networks for assisting users in a decision making process, and a method for correlating descriptive attributes of a portfolio of assets for valuation of the assets included within the portfolio, and the fact that the processes and systems described by Thiesson neither recognize nor solve any of the problems addressed by the present invention, it is respectfully submitted that Thiesson is non-analogous art that would not be looked to for potential solutions for correlating descriptive attributes of a portfolio of assets for valuation of the assets included within a portfolio.

For at least the reasons set forth above, Applicants respectfully submit that the present claims are patentable over Freeman in view of Thiesson.

Freeman describes a method for mortgage and closed end loan portfolio management in the form of an analytic tool designed to improve analysis of past and future performance of loan portfolios. The method includes aggregating loan units into loan vintages, wherein the loans in each vintage originate within a predetermined time interval of one another. The method further includes comparing different vintages to one another in a manner such that the ages of the loans in the different vintages are comparable to one another. An early warning component of the system predicts delinquency rates expected for a portfolio of loans during a forward looking time window. A matrix link component of the invention combines the loan vintage analysis with the early warning component of the invention and predicts the default rate of the loan portfolios at a selected future point in time. The results of the analysis are graphically depicted and/or automatically fedback to provide "yes" or "no" decisions regarding investments in various loan portfolios (see abstract).

More specifically, Freeman describes loan portfolio management tool as departing from the prior art by providing a dynamic underwriting method and system (30) comprising several key components including an early warning system (32), a Crus Classes analysis section (34) and a matrix link (36). Essentially, the information obtained from the subsystems (32), (34) and (36)

is designed to be applied, via feedback line (38), to the decision box (14) in a manner which systemizes and provides a standardized approach to forming the decisions whether to book loans. The invention increases the reliability, consistency and speed of the loan acceptance decision process. Further, the dynamic underwriting system (30) can also be applied via feedback line (40) to the decisional box (32) which addresses the decisions at block (32) whether to purchase loan servicing rights of loans owned by other financial institutions.

Notably, Freeman does not describe or suggest valuating a portfolio of assets, nor does Freeman describe or suggest computing a value for each asset included within a first portion of an asset portfolio. Rather, Freeman describes (1) aggregating loan units into loan vintages and comparing different vintages to one another in a manner such that the ages of the loans in the different vintages are comparable to one another, which is referred to as the Crus Classes component; (2) an early warning component of the system for predicting delinquency rates expected for a portfolio of loans during a forward looking time window; and (3) a matrix link component that combines the loan vintage analysis with the early warning component of the invention and predicts the default rate of the loan portfolios at a selected future point in time. Applicants submit that none of these components described in Freeman teach computing a value of each asset included within an asset portfolio.

Thiesson describes the construction of mixtures of Bayesian networks. The invention uses such mixtures of Bayesian networks to perform inferencing. A mixture of Bayesian networks (MBN) consists of plural hypothesis-specific Bayesian networks (HSBNs) having possibly hidden and observed variables. A common external hidden variable is associated with the MBN, but is not included in any of the HSBNs. The number of HSBNs in the MBN corresponds to the number of states of the common external hidden variable, and each HSBN is based upon the hypothesis that the common external hidden variable is in a corresponding one of those states. In one mode of the invention, the MBN having the highest MBN score is selected for use in performing inferencing. In another mode of the invention, some or all of the MBNs are retained as a collection of MBNs which perform inferencing in parallel, their outputs being weighted in accordance with the corresponding MBN scores and the MBN collection output being the weighted sum of all the MBN outputs. In one application of the invention,

collaborative filtering may be performed by defining the observed variables to be choices made among a sample of users and the hidden variables to be the preferences of those users.

Notably, Thiesson discusses using mixtures of Bayesian networks to perform inferencing for use in assisting a user in a decision making process. However, Thiesson does not describe, teach or even mention *statistically inferring a value for each asset included within a second portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second portion and asset data acquired from analyzing the first portion of the asset portfolio including the computed value of each asset included with the first portion*. (Emphasis added.) In fact, Thiesson does not even mention valuing an asset.

Claim 1 recites a method for correlating descriptive attributes of a portfolio of assets for valuation of the assets included within the portfolio using a computer coupled to a database, the method includes "segmenting the portfolio of assets into at least two valuation portions...at least one of fully underwriting each asset individually included within a first portion of the asset portfolio, and grouping and underwriting a sample of assets included within the first portion of the asset portfolio for computing a value for each asset included within the first portion of the asset portfolio, the valuation computation is performed by the computer...storing in the database asset data including the computed value and descriptive attribute variables for each asset included within the first portion...and using the computer to statistically infer a value for each asset included within a second portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second portion and asset data acquired from analyzing the first portion of the asset portfolio including the computed value of each asset included with the first portion, the correlation process including the steps of...identifying at least two descriptive attribute variables for assets included within the second portion of the portfolio for correlating with descriptive attribute variables stored in the database for assets included within the first portion of the portfolio...calculating a value of a response variable for assets included within the second portion based on the asset data assigned to assets included within the first portion having descriptive attribute variables that correlate with the identified descriptive attribute variables...grouping the assets included within the second portion according to the calculated value of the response variable...and displaying the groupings."

Neither Freeman nor Thiesson, considered alone or in combination, describe or suggest a method for correlating descriptive attributes of a portfolio of assets for valuation of the assets as recited in Claim 1. More specifically, neither Freeman nor Thiesson, considered alone or in combination, describe or suggest a method for correlating descriptive attributes of a portfolio of assets for valuation of the assets included within the portfolio that includes at least one of fully underwriting each asset individually included within a first portion of the asset portfolio, and grouping and underwriting a sample of assets included within the first portion of the asset portfolio *for computing a value for each asset included within the first portion of the asset portfolio, and storing in the database asset data including the computed value and descriptive attribute variables for each asset included within the first portion.* (Emphasis added.)

Moreover, neither Freeman nor Thiesson, alone or in combination, describe or suggest *using a computer to statistically infer a value for each asset included within a second portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second portion and asset data acquired from analyzing the first portion of the asset portfolio including the computed value of each asset included with the first portion*. (Emphasis added.)

Furthermore, neither Freeman nor Thiesson, alone or in combination, describe or suggest a *correlation process* that includes *identifying at least two descriptive attribute variables* for assets included within the second portion of the portfolio for *correlating with descriptive attribute variables stored in the database for assets included within the first portion of the portfolio, calculating a value of a response variable for assets included within the second portion based on the asset data assigned to assets included within the first portion having descriptive attribute variables that correlate with the identified descriptive attribute variables*, and *grouping the assets* included within the second portion according to the calculated value of the response variable. (Emphasis added.)

Rather, Freeman describes a method for mortgage and closed end loan portfolio management in the form of an analytic tool designed to improve analysis of past and future performance of loan portfolios. More specifically, Freeman describes a system wherein for each group of loans of a particular age, the system uses a 3-month transition matrix to forecast three months forward, a 6-month transition matrix to forecast six months forward, a 9-month transition

matrix to forecast nine months forward and a 12-month transition matrix to forecast twelve months forward. Based on the data, the system calculates respectively looking forward three, six, nine and twelve months: (1) how many good loans and bad loans will exist from the portfolio; (2) how many good loans will turn into bad; and (3) how many bad loans will remain bad. From this data, one obtains the classic "roll-rate" forecast which provides the first component of the forecast. The above approach merely projects forward the results that have already occurred in the past, on the expectation that they will repeat themselves. However, a greater benefit of the matrix link technique of the present invention comes from adding the additional information that is contained in and/or obtained by the early warning system (32). (Col. 17, line 52 to Col. 18, line 5).

The system described in Freeman (a) calculates an empirical ratio obtained as – the cumulative number of loans which are 90+ at each quarter (EOP) and divides it by the number of loans that are 90+ at least once during these four quarters; (b) from the EWS (32), the system obtains or forecasts the "bad" rate for the two-year window based on the EWS (32); and (c) using the EWS (32), the system forecasts the bad rate and the empirical ratio above as a new piece of information to adjust the classic "roll-rate" forecast. (Col. 18, lines 6-20).

Notably, Freeman does not describe or suggest valuating a portfolio of assets, nor does Freeman describe or suggest computing a value for each asset included within a first portion of an asset portfolio. Accordingly, Freeman does not describe or suggest the recitations of Claim 1.

Similarly, although Thiesson describes using mixtures of Bayesian networks to perform inferencing for use in assisting a user in a decision making process, Thiesson does not describe, teach or even mention *statistically inferring a value for each asset included within a second portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second portion and asset data acquired from analyzing the first portion of the asset portfolio including the computed value of each asset included with the first portion*. (Emphasis added.) In fact, Thiesson does not even mention valuing an asset.

The Office Action asserts that Thiesson discloses "using the computer to statistically infer a value for each asset included within a second portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second

portion and asset data..." Applicants traverse this assertion. Applicants submit that Thiesson does not teach inferring a value for each asset included within an asset portfolio.

Moreover, because Thiesson does not describe or teach at least one of fully underwriting each asset individually included within a first portion of the asset portfolio, and grouping and underwriting a sample of assets included within the first portion of the asset portfolio *for computing a value for each asset included within the first portion of the asset portfolio, and storing in the database asset data including the computed value and descriptive attribute variables for each asset included within the first portion,* Thiesson cannot describe or teach *statistically inferring a value for each asset included within a second portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second portion and asset data acquired from analyzing the first portion of the asset portfolio including the computed value of each asset included with the first portion.* (Emphasis added.)

Because no combination of Freeman and Thiesson describe or teach the recitations of Claim 1. Applicants submit that Claim 1 is patentable. Accordingly, Applicants respectfully submit that Claim 1 is patentable over Freeman in view of Thiesson.

For at least the reasons as set forth above, Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of Claim 1 be withdrawn.

Claims 2-10 depend from independent Claim 1 which is submitted to be in condition for allowance. When the recitations of Claims 2-10 are considered in combination with the recitations of Claim 1, Applicants submit that dependent Claims 2-10 are also patentable over Freeman in view of Thiesson.

Claim 11 recites a system for correlating descriptive attributes of an asset portfolio for valuation of the assets included within the portfolio, the system including a computer configured as a server and further configured with a database of asset portfolios and to enable valuation process analytics, and at least one client system connected to the server through a network, the server configured to "segment the portfolio of assets into at least two valuation portions...prompt a user to at least one of fully underwrite each asset individually included within a first portion of

the asset portfolio, and group and underwrite a sample of assets included within the first portion of the asset portfolio for computing a value for each asset included within the first portion of the asset portfolio...store in the database asset data including the computed value and descriptive attribute variables for each asset included within the first portion...statistically infer a value for each asset included within a second portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second portion and asset data acquired from analyzing the first portion of the asset portfolio including the computed value of each asset included with the first portion, the correlation process including the steps of...identifying at least two descriptive attribute variables for assets included within the second portion of the portfolio for correlating with descriptive attribute variables stored in the database for assets included within the first portion of the portfolio...calculating a value of a response variable for assets included within the second portion based on the asset data assigned to assets included within the first portion having descriptive attribute variables that correlate with the identified descriptive attribute variables...grouping the assets included within the second portion according to the calculated value of the response variable...and displaying the groupings."

Claim 11, as herein amended, recites a system comprising, among other things, a computer configured as a server to perform steps essentially similar to those recited in Claim 1. Thus, it is submitted that Claim 11 is patentable over Freeman and Thiesson for reasons that correspond to those given with respect to Claim 1.

For at least the reasons as set forth above, Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of Claim 11 be withdrawn.

Claims 12-20 depend from independent Claim 11 which is submitted to be in condition for allowance. When the recitations of Claims 12-20 are considered in combination with the recitations of Claim 11, Applicants submit that dependent Claims 12-20 are also patentable over Freeman in view of Thiesson.

Claim 21 recites a computer for correlating descriptive attributes of an asset portfolio for valuation of the assets included within the portfolio, the computer includes a database of asset portfolios, the computer is programmed to "segment the portfolio of assets into at least two valuation portions...prompt a user to at least one of fully underwrite each asset individually

included within a first portion of the asset portfolio, and group and underwrite a sample of assets included within the first portion of the asset portfolio for computing a value for each asset included within the first portion of the asset portfolio...store in the database asset data including the computed value and descriptive attribute variables for each asset included within the first portion...and statistically infer a value for each asset included within a second portion of the asset portfolio by performing a correlation process between descriptive attribute variables for assets included within the second portion and asset data acquired from analyzing the first portion of the asset portfolio including the computed value of each asset included with the first portion, the correlation process including the steps of...identifying at least two descriptive attribute variables for assets included within the second portion of the portfolio for correlating with descriptive attribute variables stored in the database for assets included within the first portion of the portfolio...calculating a value of a response variable for assets included within the second portion based on the asset data assigned to assets included within the first portion having descriptive attribute variables that correlate with the identified descriptive attribute variables...grouping the assets included within the second portion according to the calculated value of the response variable...and displaying the groupings."

Claim 21, as herein amended, recites a computer programmed to perform steps essentially similar to those recited in Claim 1. Thus, it is submitted that Claim 21 is patentable over Freeman and Thiesson for reasons that correspond to those given with respect to Claim 1.

For at least the reasons as set forth above, Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of Claim 21 be withdrawn.

Claims 22-30 depend from independent Claim 21 which is submitted to be in condition for allowance. When the recitations of Claims 22-30 are considered in combination with the recitations of Claim 21, Applicants submit that dependent Claims 22-30 are also patentable over Freeman in view of Thiesson.

For at least the reasons set forth above, Applicants respectfully request that the Section 103 rejection of Claims 1-30 be withdrawn.

In addition to the argument set forth above, Applicants respectfully submit that the Section 103 rejection of Claims 1-30 is not a proper rejection. Obviousness cannot be established by merely suggesting that it would have been obvious to one of ordinary skill in the art to modify Freeman using the teachings of Thiesson. More specifically, as is well established, obviousness cannot be established by combining the teachings of the cited art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combinations. It is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious. Specifically, one cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention. Further, it is impermissible to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art.

As the Federal Circuit has recognized, obviousness is not established merely by combining references having different individual elements of pending claims. Ex parte Levengood, 28 U.S.P.Q.2d 1300 (Bd. Pat. App. & Inter. 1993). MPEP 2143.01. Rather, there must be some suggestion, outside of Applicants' disclosure, in the prior art to combine such references, and a reasonable expectation of success must be both found in the prior art, and not based on Applicants' disclosure. In re Vaeck, 20 U.S.P.Q.2d 1436 (Fed. Cir. 1991). In the present case, neither suggestion nor motivation to combine the prior art disclosures, nor any reasonable expectation of success has been shown.

Neither Freeman nor Thiesson, considered alone or in combination, describe or suggest the combination(s) in Claims 1-30. Rather, the Section 103 rejection of Claims 1-30 appears to be based on a combination of teachings selected from multiple patents in an attempt to arrive at the claimed invention. Specifically, Freeman describes a method for mortgage and closed end loan portfolio management in the form of an analytic tool designed to improve analysis of past and future performance of loan portfolios; and Thiesson describes using mixtures of Bayesian networks to perform inferencing for assisting a user in a decision making process. Since there is neither teaching nor suggestion for the combination of Freeman and Thiesson, the Section 103 rejection appears to be based on a hindsight reconstruction in which isolated disclosures have

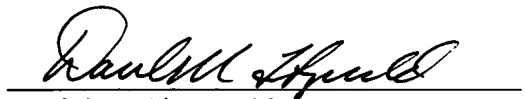
been picked and chosen in an attempt to deprecate the present invention. Of course, such a combination is impermissible, and for this reason also, Applicants request that the Section 103 rejection of Claims 1-30 be withdrawn.

For at least the reasons set for above, Applicants respectfully request that the Section 103 rejection of Claims 1-30 be withdrawn.

Newly added Claim 31 is an independent claim that recites a method that includes "segmenting the portfolio of assets into three valuation portions...fully underwriting each asset individually included within a first portion of the asset portfolio for computing a value for each asset included within the first portion of the asset portfolio, the valuation computation is performed by the computer...grouping and underwriting a sample of assets included within a second portion of the asset portfolio for computing a value of each asset included within the second portion based on the asset data acquired from the fully underwriting of the first portion of the asset portfolio...." No combination of Freeman and Thiesson describe or teach the recitations included within Claim 31. Thus, it is submitted that Claim 31 is patentable over the combination of Freeman and Thiesson.

In view of the foregoing amendments and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully Submitted,



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